PAGE: 1

RAW SEQUENCE LISTING
PATENT APPLICATION *US/09/120,044*

1643

DATE: 09/09/98
TIME: 16:01:05

INPUT SET: S28508.raw

> **This Raw Listing contains the General Information Section and up to the first 5 pages.**

```
 1                              SEQUENCE LISTING
 2
 3    (1)      General Information:
 4
 5         (i)    APPLICANTS:   MINETTI, CONCEICAO;
 6                              MICHON, FRANCIS;
 7                              PULLEN, JEFFREY K.;
 8                              POLDVINO-BODNAR, MARYELLEN;
 9                              LIANG, SHU-MEI;
10                              TAI, JOSEPH Y.
11
12       (ii)    TITLE OF INVENTION: MODIFIED IMMUNOGENIC
13               PNEUMOLYSIN COMPOSITIONS AS VACCINES
14
15      (iii)    NUMBER OF SEQUENCES:  18
16
17       (iv)    CORRESPONDENCE ADDRESS:
18               (A)   ADDRESSEE:  MORGAN & FINNEGAN, L.L.P.
19               (B)   STREET:  345 PARK AVENUE
20               (C)   CITY:  NEW YORK
21               (D)   STATE:  NEW YORK
22               (E)   COUNTRY:  USA
23               (F)   ZIP:  10154
24
25        (v)    COMPUTER READABLE FORM:
26               (A)   MEDIUM TYPE:  FLOPPY DISK
27               (B)   COMPUTER:  IBM PC COMPATIBLE
28               (C)   OPERATING SYSTEM:  PC-DOS/MS-DOS
29               (D)   SOFTWARE:  MICROSOFT WORD 97
30
31       (vi)    CURRENT APPLICATION DATA:
32               (A)   APPLICATION NUMBER:  09/120,044
33               (B)   FILING DATE:  1998-07-21
34               (C)   CLASSIFICATION:
35
36      (vii)    PRIOR APPLICATION DATA:
37               (A)   APPLICATION NUMBER: 60/053,306
38               (B)   FILING DATE:  1997-07-21
39
40      (vii)    PRIOR APPLICATION DATA:
41               (A)   APPLICATION NUMBER: 60/073,456
42               (B)   FILING DATE:  1998-02-02
43
44     (viii)    ATTORNEY/AGENT INFORMATION:
45               (A)   NAME: DARRYL H. STEENSMA
46               (B)   REGISTRATION NUMBER: 43,155
```

INPUT SET: S28508.raw

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47
48
49
50
51
52
53
54            (C)   REFERENCE/DOCKET NUMBER:   1758-4036US2
55
56      (ix) TELECOMMUNICATION INFORMATION:
57            (A)   TELEPHONE:  (212) 758-4800
58            (B)   TELEFAX:  (212) 751-6849
59            (C)   TELEX:  421792
60
61
62  (2) INFORMATION FOR SEQ ID NO:1:
63
64      (i) SEQUENCE CHARACTERISTICS:
65            (A) LENGTH:  1413
66            (B) TYPE:  nucleic acid
67            (C) STRANDEDNESS:  double
68            (D) TOPOLOGY:  linear
69
70      (ii) MOLECULE TYPE:  cDNA
71
72      (vi) ORIGINAL SOURCE:
73            (A) ORGANISM: S. pneumoniae
74
75      (xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:
76
77  atggcaaata aagcagtaaa tgactttata ctagctatga        40
78
79  attacgataa aaagaaactc ttgacccatc agggagaaag        80
80
81  tattgaaaat cgtttcatca aagagggtaa tcagctaccc       120
82
83  gatgagtttg ttgttatcga aagaaagaag cggagcttgt       160
84
85  cgacaaatac aagtgatatt tctgtaacag ctaccaacga       200
86
87  cagtcgcctc tatcctggag cacttctcgt agtggatgag       240
88
89  accttgttag agaataatcc cactcttctt gcggtcgatc       280
90
91  gtgctccgat gacttatagt attgatttgc ctggtttggc       320
92
93  aagtagcgat agctttctcc aagtggaaga tcccagcaat       360
94
95  tcaagtgttc gcggagcggt aaacgatttg ttggctaagt       400
96
97  ggcatcaaga ttatggtcag gtcaataatg tcccagctag       440
98
99  aatgcagtat gaaaaaatca cggctcacag catggaacaa       480
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RAW SEQUENCE LISTING
PATENT APPLICATION   *US/09/120,044*

INPUT SET: S28508.raw

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100
101
102
103
104
105
106
107
108    ctcaaggtca agtttggttc tgactttgaa aagacaggga          520
109
110    attctcttga tattgatttt aactctgtcc attcaggcga          560
111
112    aaagcagatt cagattgtta attttaagca gatttattat          600
113
114    acagtcagcg tagacgctgt taaaaatcca ggagatgtgt          640
115
116    ttcaagatac tgtaacggta gaggatttaa aacagagagg          680
117
118    aatttctgca gagcgtcctt tggtctatat ttcgagtgtt          720
119
120    gcttatgggc gccaagtcta tctcaagttg gaaaccacga          760
121
122    gtaagagtga tgaagtagag gctgcttttg aagctttgat          800
123
124    aaaaggagtc aaggtagctc ctcagacaga gtggaagcag          840
125
126    attttggaca atacagaagt gaaggcggtt attttagggg          880
127
128    gcgacccaag ttcgggtgcc cgagttgtaa caggcaaggt          920
129
130    ggatatggta gaggacttga ttcaagaagg cagtcgcttt          960
131
132    acagcagatc atccaggctt gccgatttcc tatacaactt         1000
133
134    cttttttacg tgacaatgta gttgcgacct ttcaaaatag         1040
135
136    tacagactat gttgagacta aggttacagc ttacagaaac         1080
137
138    ggagatttac tgctggatca tagtggtgcc tatgttgccc         1120
139
140    aatattatat tacttggaat gaattatcct atgatcatca         1160
141
142    aggtaaggaa gtcttgactc ctaaggcttg ggacagaaat         1200
143
144    gggcaggatt taacggctca ctttaccact agtattcctt         1240
145
146    taaaagggaa tgttcgtaat ctctctgtca aaattagaga         1280
147
148    gtgtaccggg cttgcttggg aatggtggcg tacggtttat         1320
149
150    gaaaaaaccg atttgccact agtgcgtaag cggacgattt         1360
151
152    ctatttgggg aacaactctc tatccgcagg tagaagataa         1400
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153
154
155
156
157
158
159
160
161    ggtagaaaat gac                                        1413
162
163
164    (2) INFORMATION FOR SEQ ID NO:2:
165
166        (i) SEQUENCE CHARACTERISTICS:
167            (A) LENGTH:  1413
168            (B) TYPE:  nucleic acid
169            (C) STRANDEDNESS:  double
170            (D) TOPOLOGY:  linear
171
172        (ii) MOLECULE TYPE:  cDNA
173
174        (vi) ORIGINAL SOURCE:
175            (A) ORGANISM: S. pneumoniae
176
177        (xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:
178
179    atggcaaata aagcagtaaa tgactttata ctagctatga          40
180
181    attacgatan aaanaaactc ttgacccatc agggagaaag          80
182
183    tattgaaaat cgtttcanca aagagggtaa tcagctaccc          120
184
185    gntgagtttg ttgntancga aagaaagaag cggagcttgt          160
186
187    cgacaaatac aagtgatatt nctgtancag ctaccnacga          200
188
189    cagtcgcctc tatcctggag cacttctcgt agtggatgag          240
190
191    accttgtnag agaataatcc cactcttctt gcggtngatc          280
192
193    gtgctccgat gacttatagt antgntttgc ctggtttggc          320
194
195    aagtagcgat agctttctcc aagtggaaga ncccagcaat          360
196
197    tcaagtgttc gcggagcggn anacgatttg ttggctaagt          400
198
199    ggcatcaaga ttatggtcag gtcaataatg tcccagctag          440
200
201    aangcagtat gaaaaaatna cggctcacag catggaacaa          480
202
203    ctcaaggtca agtttggttc tgactttgaa aagncaggga          520
204
205    attctcttga tattgatttt aactctgtcc attcaggnga          560
```

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206
207
208
209
210
211
212
213
214   aaagcngatt cagattgtta atnttaagca gatttattat          600
215
216   acagtcagcg tagacgctgt taaaaatcca ggagatgtgt          640
217
218   ttcaagatac tgtaacggta gaggatttaa aacagagagg          680
219
220   aatttctgca gagcgtcctt tggtctatat ttcgagngtt          720
221
222   gcttatgggc gccaagtcta tctcaagttg gaaaccacga          760
223
224   gtangagtgn tgaagtagag gctgcttttg aagctttgat          800
225
226   aaaaggagtc aaggtagctc ctcagacaga gtggaagcag          840
227
228   attttggaca atacagaagt gaaggcggtt attttagggg          880
229
230   gcgacccaag ttcgggtgcc cgagttgtaa caggcaaggt          920
231
232   ggatatggta gaggacttga ttcaagaagg cagtcgcttt          960
233
234   acagcagatc atccaggctt gccgatttcc tatacaactt         1000
235
236   ctttttttacg tgacaatgta gttgcgacct ttcaaaanag         1040
237
238   tacagactat gttgagacta aggttacagc ttacagaaac         1080
239
240   ggagatttac tgctggatca tagtggtgcc tatgttgccc         1120
241
242   aatattatat tacttggnat gaattatcct atgatcatca         1160
243
244   aggtaaggaa gtcttgactc ctaaggcttg ggacagaaat         1200
245
246   gggcaggatt tnacggctca ctttaccact agtattcctt         1240
247
248   taaaagggaa tgttcgtaat ctctctgtca aaattagaga         1280
249
250   gtgtaccggg cttgcntggg aatggtggcg tacggtttat         1320
251
252   gaaaaaaccg atttgccact agtgcgtaag cggacgattt         1360
253
254   ctatttgggg aacaactctc tatccncagg tagangataa         1400
255
256   ggtagaaaat gac                                      1413
257
258
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SEQUENCE VERIFICATION REPORT
PATENT APPLICATION *US/09/120,044*

INPUT SET: S28508.raw

Line	Error	Original Text